

# MORTALITY PATTERNS AMONG INCIDENT HEMODIALYSIS DIABETIC PATIENTS: A COHORT REGISTRY-BASED STUDY

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## OBJECTIVES

Mortality rates are extremely high on dialysis. We investigated to which extent the duration of pre-dialysis nephrological care (PDNC) influences the mortality patterns among diabetic dialysis patients (DP).

## METHODS

We performed an analysis of the Moscow City Nephrology Registry with inclusion of 887 incident DP with type 1 (DM1) and 912 DP with type 2 (DM2) diabetes mellitus started dialysis treatment (both hemo- and peritoneal dialysis) between 1/1/1995 and 31/12/2013. Median duration of follow-up was 1.0 years (IQR 0.2-2.6). Age at dialysis initiation was 40.0±11.6 years for DM1 and 62.5±9.3 for DM2, males accounted for 48.5% and 45.6%, respectively. We defined 2 groups of patients based on the duration of PDNC measured from the first visit to nephrologist in Moscow to the start of dialysis: early (PDNC ≥1 year) and late (PDNC <1 year).

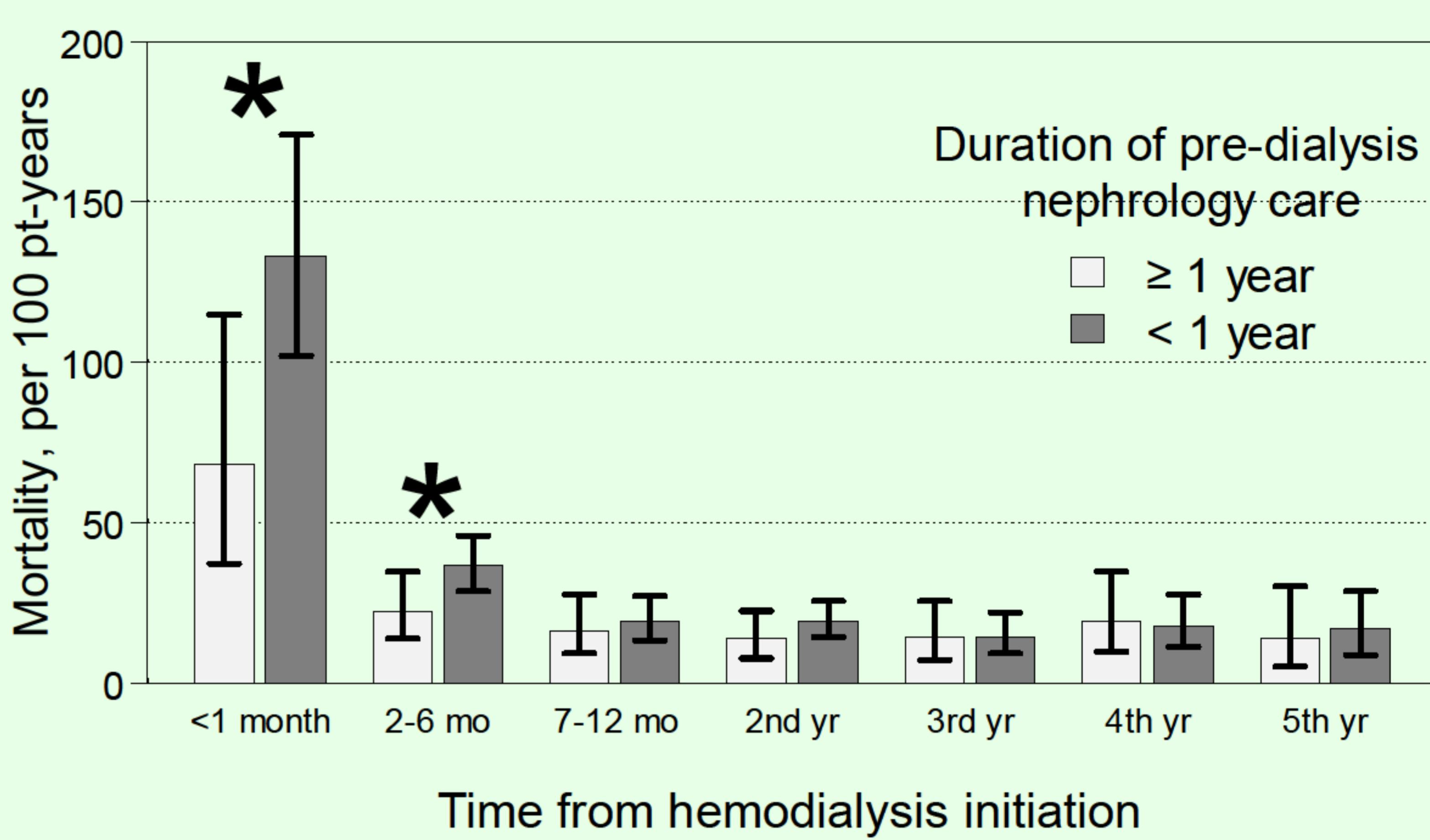
## RESULTS

Only 29.7% of DM1 patients and 25.9% of DM2 patients had longer than 1 year history of pre-dialysis nephrological care. DM1 patients were followed-up for the total 1,495 patient-years and 362 deaths occurred during this period; DM2 — 1,416 patient-years and 491 deaths, respectively. Overall, mortality among DM2 (34.7 per 100 patient-years, 95%CI 31.7-37.9) was substantially higher ( $P<0.0005$ ) than among DM1 patients (24.2 per 100 patient-years, 95%CI 21.8-26.8). DM1 patients with PDNC < 1 year in comparison with longer PDNC had significantly higher mortality rates during the first month (133.2 [95%CI 102.1-170.8] vs 68.4 [95%CI 37.4-114.8] per 100 patient-years,  $P<0.02$ ) and 2-6 months (36.5 [95%CI 28.5-46.1] vs 22.3 [95%CI 13.6-34.5] per 100 patient-years,  $P<0.05$ ) after dialysis initiation. DM2 patients with PDNC < 1 year in comparison with longer PDNC had significantly higher mortality rates only during the first month (225.8 [95%CI 185.6-272.2] vs 112.5 [95%CI 68.7-173.7] per 100 patient-years,  $P<0.005$ ) after dialysis initiation. Influence of PDNC doesn't appear during the subsequent follow-up.

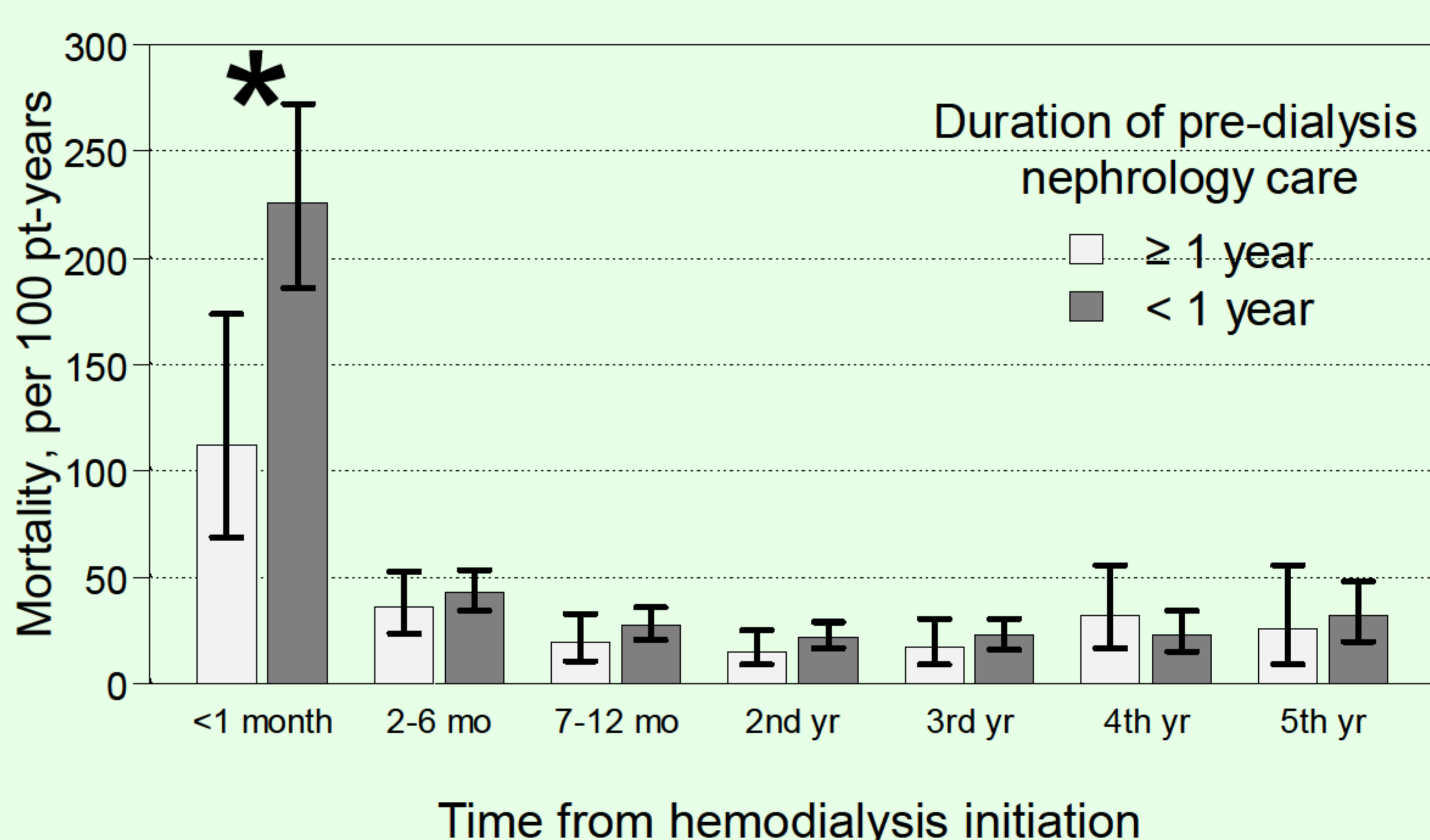
## RESULTS

Figure. Mortality in incident patients with diabetes mellitus type 1 (A) and type 2 (B) according time from dialysis initiation

A) Type 1 diabetes



B) Type 2 diabetes



\*\*\*  $P<0.05$

## CONCLUSIONS

Pre-dialysis nephrology care longer than 1 year is a significant factor for decreasing early mortality of dialysis patients with both diabetes mellitus type 1 and type 2. All possible efforts should be implemented for increasing the percentage of patients with appropriate nephrology care before the dialysis initiation. Enhancement of outpatient nephrology service in parallel with improving cooperation with endocrinology service is urgently needed.

## CONTACTS

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